

SEQUENCE LISTING

<110> Bernard, Dominique  
Mehul, Villejuif  
L'OREAL L'OREAL

<120> USE OF ASPARTIC PROTEASES IN COSMETICS AND THERAPEUTICS

<130> 032487-010

<140> 10/520,521

<141> 2005-01-07

<150> PCT/FR03/002151

<151> 2003-07-09

<150> FR 02 08613 <151> 2002-07-09

<160> 39

<170> PatentIn version 3.1

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Gln Phe Leu Val Ala Asn Ala Ser Ala Glu Glu Ala Ile Ile Gly Thr  
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Asp Val Leu Gln Asp His Asn Ala Ile Leu Asp Phe Glu His Arg Thr  
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96

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144

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192

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384

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Glu Ser Ser Arg Met Ala Gly Ser Gly Ala Arg Ser Glu Glu Gly Arg	
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cac cca aac ttg tgg gag gag gtc act gat ggc gat ctg gac acc ctg      144
His Pro Asn Leu Trp Glu Glu Val Thr Asp Gly Asp Leu Asp Thr Leu
35 40 45

cag ccc ttt gag aat gtg gta aag gtg gcc aat ggt gct gaa atg aag      192
Gln Pro Phe Glu Asn Val Val Lys Val Ala Asn Gly Ala Glu Met Lys
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atc ctg ggt gtc tgg gat aca gcg gtg tcc cta ggc aag ctg aag ctg      240
Ile Leu Gly Val Trp Asp Thr Ala Val Ser Leu Gly Lys Leu Lys Leu
65 70 75 80

aag gca cag ttc cta gtg gcc aat gcg agt gcc gag gaa gcc atc att      288
Lys Ala Gln Phe Leu Val Ala Asn Ala Ser Ala Glu Glu Ala Ile Ile
85 90 95

ggc act gat gtg ctc cag gac cac aat gct atc ctg gac ttt gag cac      336
Gly Thr Asp Val Leu Gln Asp His Asn Ala Ile Leu Asp Phe Glu His
100 105 110

cgc aca tgc acc ctg aaa ggg aag aag ttt cgc ctt ctg cct gtg gga      384
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Leu Gln Pro Phe Glu Asn Val Val Lys Val Ala Asn Gly Ala Glu Met  
65 70 75 80  
aag atc ctg ggt gtc tgg gat aca gcg gtg tcc cta ggc aag ctg aag 288  
Lys Ile Leu Gly Val Trp Asp Thr Ala Val Ser Leu Gly Lys Leu Lys  
85 90 95  
ctg aag gca cag ttc cta gtg gcc aat gcg agt gcc gag gaa gcc atc 336  
Leu Lys Ala Gln Phe Leu Val Ala Asn Ala Ser Ala Glu Glu Ala Ile  
100 105 110  
att ggc act gat gtg ctc cag gac cac aat gct atc ctg gac ttt gag 384  
Ile Gly Thr Asp Val Leu Gln Asp His Asn Ala Ile Leu Asp Phe Glu  
115 120 125  
cac cgc aca tgc acc ctg aaa ggg aag aag ttt cgc ctt ctg cct gtg 432  
His Arg Thr Cys Thr Leu Lys Gly Lys Lys Phe Arg Leu Leu Pro Val  
130 135 140  
gga ggg tcc ctg gaa gat gag ttt gac ctg gag ctc ata gag gag gac 480  
Gly Gly Ser Leu Glu Asp Glu Phe Asp Leu Glu Ile Glu Glu Asp  
145 150 155 160 165 170  
Page 13

145 150 155 160

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Pro Ser Ser Glu Glu Gly Arg Gln Glu Leu Ser His  
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Lys Glu Ile Val Met Gly Lys Gly Tyr Tyr Leu Lys Gly Lys Ile Gly  
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Lys Val Pro Val Arg Phe Leu Val Asp Ser Gly Ala Gln Val Ser Val  
35 40 45  
Val His Pro Asn Leu Trp Glu Glu Val Thr Asp Gly Asp Leu Asp Thr  
50 55 60  
Leu Gln Pro Phe Glu Asn Val Val Lys Val Ala Asn Gly Ala Glu Met  
65 70 75 80  
Lys Ile Leu Gly Val Trp Asp Thr Ala Val Ser Leu Gly Lys Leu Lys  
85 90 95  
Leu Lys Ala Gln Phe Leu Val Ala Asn Ala Ser Ala Glu Glu Ala Ile  
100 105 110  
Ile Gly Thr Asp Val Leu Gln Asp His Asn Ala Ile Leu Asp Phe Glu  
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aaa gag atc gtc atg ggt aag ggc tac tat ctc aag ggg aag att ggc  
Lys Glu Ile Val Met Gly Lys Gly Tyr Tyr Leu Lys Gly Lys Ile Gly  
20 25 30

48

96

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gtc cac cca aac ttg tgg gag gag gtc act gat ggc gat ctg gac acc Val His Pro Asn Leu Trp Glu Glu Val Thr Asp Gly Asp Leu Asp Thr 50 55 60	192
ctg cag ccc ttt gag aat gtg gta aag gtg gcc aat ggt gct gaa atg Leu Gln Pro Phe Glu Asn Val Val Lys Val Ala Asn Gly Ala Glu Met 65 70 75 80	240
aag atc ctg ggt gtc tgg gat aca gcg gtg tcc cta ggc aag ctg aag Lys Ile Leu Gly Val Trp Asp Thr Ala Val Ser Leu Gly Lys Leu Lys 85 90 95	288
ctg aag gca cag ttc cta gtg gcc aat gcg agt gcc gag gaa gcc atc Leu Lys Ala Gln Phe Leu Val Ala Asn Ala Ser Ala Glu Glu Ala Ile 100 105 110	336
att ggc act gat gtg ctc cag gac cac aat gct atc ctg gac ttt gag Ile Gly Thr Asp Val Leu Gln Asp His Asn Ala Ile Leu Asp Phe Glu 115 120 125	384
cac cgc aca tgc acc ctg aaa ggg aag aag ttt cgc ctt ctg cct gtg His Arg Thr Cys Thr Leu Lys Gly Lys Lys Phe Arg Leu Leu Pro Val 130 135 140	432
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35 40 45  
Thr Lys Leu Arg Phe Leu Lys Glu Ser Leu Arg Gly Glu Ala Leu Gly  
50 55 60  
Val Tyr Asn Arg Leu Ser Pro Gln Asp Gln Gly Asp Tyr Gly Thr Val  
65 70 75 80  
Lys Glu Ala Leu Leu Lys Ala Phe Gly Val Pro Gly Ala Ala Pro Ser  
85 90 95  
His Leu Pro Lys Glu Ile Val Met Gly Lys Gly Tyr Tyr Leu Lys Gly  
100 105 110

Lys Ile Gly Lys Val Pro Val Arg Phe Leu Val Asp Ser Gly Ala Gln  
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Val Ser Val Val His Pro Asn Leu Trp Glu Glu Val Thr Asp Gly Asp  
130 135 140  
Leu Asp Thr Leu Gln Pro Phe Glu Asn Val Val Lys Val Ala Asn Gly  
145 150 155 160  
Ala Glu Met Lys Ile Leu Gly Val Trp Asp Thr Ala Val Ser Leu Gly  
165 170 175  
Lys Leu Lys Leu Lys Ala Gln Phe Leu Val Ala Asn Ala Ser Ala Glu  
180 185 190  
Glu Ala Ile Ile Gly Thr Asp Val Leu Gln Asp His Asn Ala Ile Leu  
195 200 205  
Asp Phe Glu His Arg Thr Cys Thr Leu Lys Gly Lys Lys Phe Arg Leu  
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Leu Leu Asp Thr Gly Ala Asp Ile Thr Ile Leu Asn Arg Arg Asp Phe  
35 40 45  
Gln Val Lys Asn Ser Ile Glu Asn Gly Arg Gln Asn Me tIle Gly Val  
50 55 60  
Gly Gly Gly Lys Arg Gly Thr Asn Tyr Ile Asn Val His Leu Glu Ile  
65 70 75 80  
Arg Asp Glu Asn Tyr Lys Thr Gln Cys Ile Phe Gly Asn Val Cys Val  
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Leu Glu Asp Asn Ser Leu Ile Gln Pro Leu Leu Gly Arg Asp Asn Met  
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Val Ala Gly Ile Glu Leu Gly Asn Asn Tyr Ser Pro Lys Ile Val Gly  
35 40 45  
Gly Ile Gly Gly Phe Ile Asn Thr Lys Glu Tyr Lys Asn Val Glu Ile  
50 55 60  
Glu Val Leu Asn Lys Lys Val Arg Ala Thr Ile Met Thr Gly Asp Thr  
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Leu Asn Leu

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Ala Asn Ser Met Gly Lys Gly Tyr Tyr Leu Lys Gly Lys Ile Gly Lys  
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20 25 30  
His Pro Asn Leu Trp Glu Glu Val Thr Asp Gly Asp Leu Asp Thr Leu  
35 40 45  
Gln Pro Phe Glu Asn Val Val Lys Val Ala Asn Gly Ala Glu Met Lys  
50 55 60  
Ile Leu Gly Val Trp Asp Thr Ala Val Ser Leu Gly Lys Leu Lys Leu  
65 70 75 80  
Lys Ala Gln Phe Leu Val Ala Asn Ala Ser Ala Glu Glu Ala Ile Ile  
85 90 95  
Gly Thr Asp Val Leu Gln Asp His Asn Ala Ile Leu Asp Phe Glu His  
100 105 110  
Arg Thr Cys Thr Leu Lys Gly Lys Lys Phe Arg Leu Leu Pro Val Gly  
115 120 125  
Gly Ser Leu Glu Asp Glu Phe Asp Leu Glu  
130 135